



**REASON & REVELATION**  
*A Monthly Journal of Christian Evidences*

JULY 2019 • VOL. 39 • NO. 7

Was the  
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Enough** for  
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**Animals?**

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Record**  
Support the  
**Flood?**

Were the  
**Giza Pyramids**  
**Built Before**  
**the Flood?**

Another Great AP  
**Summer Camp**



# Does the Fossil Record SUPPORT Creation and the Flood?

Jeff Miller, Ph.D.

## Article In Brief...

**The fossil record is often touted as solid proof that the Theory of Evolution is true, while Creation and the Flood are false. When one examines the evidence, the opposite is found to be the case. The three major traits that characterize the fossil record—abrupt appearance, stasis, and extinction—contradict evolutionary predictions and verify Creation/Flood predictions.**

**A** PROMINENT argument used in favor of Darwinian evolution and against biblical Creation, with its account of the global Deluge of Noah's day, centers on the nature of the fossil record recorded in the layers of rock beneath and around us. Does the fossil record indeed conflict with biblical Creation?

In order for a scientific theory to be validated, it should be able to make predictions about what research would discover if the theory is true. If gradual Darwinian evolution accounts for the origin of all current species from previous, less complex species, starting with an original, simple common ancestor that was a single-celled organism, one would make certain predictions that would be verified upon examining the fossil record. For example, the fossil record should show single-celled organisms at the

base of the fossil record, followed by fossils of other simple organisms. Billions of fossils of intermediary organisms would be predicted to exist that connect the single-celled organism to the next species. Every species thereafter would follow suit in its representation in the fossil record, with its own billions of transitional fossils linking it to a previous species. Further, since Darwinian evolution would predict "survival of the fittest," with a constant upward trend in the evolution of species, extinction of any species thought to be millions of years old would be inevitable. As a new, more fit species evolved onto the scene, it would survive, pushing out its previous, less fit form.

On the other hand, if biblical Creation and the Flood are true, completely different predictions would be made concerning the fossil record. Since God initially created

representatives of all kinds, rather than their evolving from previous forms, since fossil forming phenomena are rare, and since the Earth is young, the bulk of the fossil record would be, not a record of past life and evolution on a billions of years old Earth, but a record of death as the year-long Flood progressed. Few fossils would be found below the Flood layers, with many of those having likely been destroyed when the Flood began. The Flood layers, on the other hand, would be the equivalent of a worldwide graveyard—a record of the destruction of "all living things which were on the face of the ground" (Genesis 7:23).

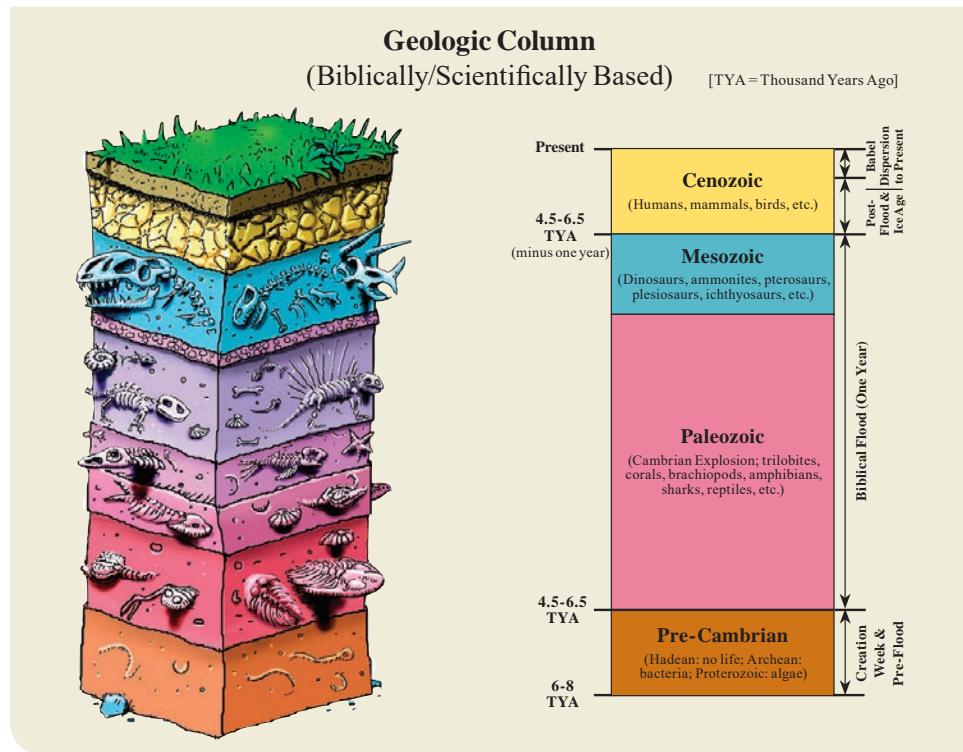
Creationists would predict that when the Flood began, mass destruction of life occurred worldwide, and therefore the fossil record would begin with an explosion of fossil forms that were fully formed and functional, with no evidence of having evolved from previous forms. The bulk of these fossils would be in sedimentary rock, since the Flood was an aqueous event. Both simple and complex creatures would be mixed throughout the fossil record, while larger, faster, and/or "smarter" creatures would sometimes be found higher in the record, since they could more easily escape fossil forming phenomena and survive longer. If much of the Flood waters came from the oceans, as the text and scientific evidence seem to imply,<sup>1</sup> the fossils at the base of the fossil record would be of creatures found on the ocean floor, followed by marine creatures. As the Flood waters continued to rise and the cataclysm hit the coasts, shallow water organisms and coastline creatures would be killed and buried, followed by creatures further and further inland. Marine fossils would be interspersed throughout the fossil record, since the ocean waters moving onto the land would have carried swimming creatures

with them. After the Flood ended, since fossil forming phenomena are rare, those creatures that were unable to rebound after the Flood (or which were hunted, etc.) would gradually go extinct, often with no record of having even survived the Flood. While the fossils of the year-long Flood would show no evidence of change throughout the year, the layers after the Flood would be predicted to show evidence of the diversifying of creatures after they left the Ark to repopulate the Earth.

Which model's predictions best fit the physical evidence gleaned from paleontology? Paleontologists have long acknowledged three general characteristics of the fossil record in its totality: (1) abrupt appearance; (2) stasis; and (3) extinction.<sup>2</sup> Each of these characteristics fit the Creation/Flood paradigm well, but create an "uncomfortable paradox" for the Darwinian gradual evolution paradigm.<sup>3</sup>

### CHARACTERISTIC #1: ABRUPT APPEARANCE

This general characteristic refers to the fact that when fossils first appear in the fossil record, they appear fully formed without any evolutionary history. The Cambrian Explosion, for example, refers to the many fully formed creatures that abruptly appear at the base of the fossil record with no ancestors. Reporting on research at the University of Texas at Austin, *UT News* reported: "This rapid diversification, known as the Cambrian explosion, puzzled Charles Darwin and remains one of the biggest questions in animal evolution to this day. Very few fossils exist of organisms that could be the Precambrian ancestors of bilateral animals, and even those are highly controversial."<sup>4</sup> Osorio, et al., writing in *American Scientist*, acknowledged,



As Darwin noted in the *Origin of Species*, the abrupt emergence of arthropods in the fossil record during the Cambrian presents a **problem for evolutionary biology**. There are no obvious simpler or intermediate forms—either living or in the fossil record—that show convincingly how modern arthropods evolved from worm-like ancestors. Consequently there has been a wealth of **speculation and contention**.<sup>5</sup>

The late, well known evolutionary paleontologist Stephen Jay Gould admitted: "The Cambrian explosion was the most remarkable and puzzling event in the history of life."<sup>6</sup> Famous evolutionary biologist of Oxford University, Richard Dawkins, described the Cambrian Explosion this way:

The Cambrian strata of rocks, vintage about 600 million years [secular geologists are now dating

**Reason & Revelation** is published monthly by Apologetics Press, Inc. Periodicals postage paid at Montgomery, AL. **Postmaster:** Send address changes to **Reason & Revelation**, 230 Landmark Dr., Montgomery, AL 36117; **ISSN:** [1542-0922] **USPS#** 023415.

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the beginning of the Cambrian at about 540 million years—JM], are the oldest in which we find most of the major invertebrate groups. And we find many of them already in an advanced state of evolution, the very first time they appear. **It is as though they were just planted there, without any evolutionary history.**<sup>7</sup>

Long ago, the late, famous paleontologist of Columbia University, the American Museum of Natural History, and the Museum of Comparative Zoology at Harvard, George Gaylord Simpson, admitted: “Most new species, genera, and families, and nearly all categories above the level of families, appear in the records suddenly, and are not led up to by known, gradual, completely transitional sequences.”<sup>8</sup> The Cambrian Explosion is an acknowledged problem for evolutionary theory—a falsified prediction—and yet the abrupt appearance of fully formed and functional species is an obvious, pervasive trait of the **entire** fossil record, from beginning to end.

The abrupt appearance of living organisms, however, is not the extent of the problem for evolution. Not only are the species of the fossil record fully formed and functional from the beginning of the record, but they are also complex when they abruptly appear. The trilobite, for example, is characteristic of the Cambrian strata at the base of the fossil record—a creature equipped with an extremely complex vision system, using aplanatic lenses that are more complex than the human eye, which is equipped with a single refractive lens.<sup>9</sup> The fossil record provides no evidence for the evolution of the trilobite, and yet its complexity is stunning. Complexity at the commencement of the fossil record is a falsification of a fundamental evolutionary prediction, but coincides perfectly with Creation and Flood predictions.

Evolution would also predict that **diversity** would precede **disparity** in the fossil record. In other words, varieties of a single body type (diversity) would be found in the fossil record at its base, and over time (moving up through the record), other body types would eventually emerge (disparity). One calls to mind the well-known sketches of the evolutionary tree of life, with a single-celled organism at its base gradually giving rise to the many branches and twigs that characterize all life. The biblical Creation model predicts the opposite: God initially created distinct kinds (disparity) from which came variety and diversity within those kinds. Instead of the evolutionary tree of life, one calls to mind an orchard of trees representing distinct kinds with their branches and twigs representing mere diversification and variety within those kinds. **The fossil record, once again, supports the creationist contention.** Biologists have pinpointed a few dozen distinct phyla—the level of organization used to group organisms based on their basic body plans. Of the 27 phyla represented in the fossil record, roughly 20 appear immediately in the Cambrian explosion (disparity) with no evidence of having evolved.<sup>10</sup> Variety within those phyla—species diversity—does not show up until higher in the fossil record, just as biblical Creation would predict: disparity before diversity.

Abrupt appearance of fully formed and functional, complex organisms with immense disparity is a sweeping characteristic of the fossil record. That truth is severely problematic for evolution, but it is precisely what would be predicted if biblical Creation and the Flood occurred.

## CHARACTERISTIC #2: STASIS

Stasis in the fossil record refers to the observation that after creatures appear in the fossil record, they remain virtually the same throughout their tenure in the rock layers.<sup>11</sup> While Darwinian evolution would predict a gradual change of species over millions of years, the fossil record does not reflect that prediction: transitional fossils linking one species to a distinctly different species do not exist.

Gould admitted that evolutionists “have **no direct evidence** for smooth transitions.” He acknowledged: “All paleontologists know that the fossil record contains **precious little** in the way of intermediate forms; transitions between major groups are **characteristically abrupt.**”<sup>12</sup> Writing in *Paleobiology* he explained: “The **absence of fossil evidence for intermediary stages** between major transitions in organic design, indeed our inability, even in our imagination, to construct functional intermediates in many cases, has been a persistent and nagging problem for gradualistic accounts of evolution.”<sup>13</sup>

“[T]he **extreme rarity of transitional forms** in the fossil record persists as the **trade secret** of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches: the rest is **inference**, however reasonable, **not the evidence of the fossils.**”<sup>14</sup>

Evolutionary paleontologist Steven Stanley explained: “The known fossil record fails to document a **single example** of phyletic evolution [i.e., evolution of a new phylum—JM] accomplishing a major morphological transition and hence offers **no evidence** that the gradualistic model can be valid.”<sup>15</sup> Evolutionary anthropologist and emeritus professor of the University of Oxford Robert

Barnes acknowledged that “the fossil record tells us almost nothing about the evolutionary origin of phyla and classes. **Intermediate forms are non-existent, undiscovered, or not recognized.**”<sup>16</sup> Evolutionary biologists James Valentine and Douglas Erwin wrote: “If ever we were to expect to find ancestors to or intermediates between higher taxa, it would be in the rocks of the late Precambrian to Ordovician times, when the bulk of the world’s higher animal taxa evolved. Yet **transitional alliances are unknown or unconfirmed** for any of the phyla or classes appearing then.”<sup>17</sup>

So clear is the lack of evidence of evolutionary transition in the fossil record that evolutionary zoologist of Oxford University Mark Ridley went so far as to say, “[N]o real evolutionist, whether gradualistic or punctuationist, uses the fossil record as evidence in favor of the theory of evolution as opposed to special creation.”<sup>18</sup> Why? Because the fossil record does not support evolution; **it supports Creation.** Even Charles Darwin saw the problem in the 1800s that persists today:

[T]he number of intermediate varieties, which have formerly existed, [must] be truly enormous. Why then is not every geological formation and every stratum full of such intermediate links? **Geology assuredly does not reveal any such finely graduated organic chain; and this, perhaps, is the most obvious and serious objection which can be argued against this theory** [i.e., evolution—JM].<sup>19</sup>

Colin Patterson literally “wrote the textbook” on evolution. He was the paleontologist who served as the editor of the professional journal published by the British Museum of Natural History in London. In response to a letter asking why he did not include

examples of transitional fossils in his book, he responded,

I fully agree with your comments on the lack of direct illustration of evolutionary transitions in my book. **If I knew of any**, fossil or living, I would certainly have included them.... Yet [Stephen Jay] Gould and the American Museum people are hard to contradict when they say **there are no transitional fossils....** I will lay it on the line—**there is not one such fossil for which one could make a watertight argument.**<sup>20</sup>

Notable is the fact that when paleontologists uncover a fossil that they hope will pass as a legitimate transitional form, not only is it still controversial, but the championed fossil is inevitably from a vertebrate organism. Vertebrate fossils, however, comprise roughly only 0.0125% of the fossil record—they are virtually irrelevant indicators of whether or not evolution occurred.<sup>21</sup> Since well over 99.9% of the fossil record is made up of invertebrate fossils, one would think that if evolution happened, transitional fossils would be easy to find among the invertebrates, especially since their remains tend to preserve more easily. Rarely, if ever, however, do evolutionists even claim to find alleged invertebrate transitional forms. If species evolve in the manner described by mainstream evolutionists, (1) transitional forms should not be difficult to find, and (2) they would be invertebrates most of the time. Neither of those predictions hold true.

Further verification that stasis—a lack of significant evolutionary change—reflects the fossil record pertains to what Darwin termed “living fossils.” Countless times over many years evolutionists have discovered fossils in strata laid down millions of years ago (according to the evolutionary timeline) that were thought to be extinct, presumably from having evolved

into something else. According to evolution, species are the result of “descent with modification” from other species, so it would be virtually inconceivable that a species would remain essentially the same after millions of years. After all, according to evolution, evolution happens! “Living fossils,” however, have been discovered many times over the years. “Living fossils” (a self-contradictory notion at best) are species thought to have lived millions of years ago, that have been discovered alive in modern times, virtually the same as their fossil counterpart. Consider the following sample of living fossils with the number of alleged evolutionary years since their alleged extinctions<sup>22</sup>:

- Coelacanths (300-400 million years)
- Graptolites (300 million years)
- Tuatara (over 65 million years)
- *Metasequoia* tree (over 20 million years)
- *Heliopora* coral (over 65 million years)
- Crocodiles (over 150 million years)
- Various teleost fishes (over 100 million years)
- Sturgeons (over 65 million years)
- Bowfin fish (70 million years)
- Gar fish (100 million years)
- *Pleurotomaria* gastropod (500 million years)
- *Neotrigonia* mollusk (100 million years)
- Chambered Nautilus (500 million years)
- *Neopilina* mollusk (280 million years)
- *Lingula* brachiopod (450 million years)
- Wollemi pine trees (over 65 million years)
- Horseshoe crabs (over 400 million years)
- Monoplacophorans mollusks (over 500 million years)

Once again, the predictions of the evolutionary paradigm fall woefully short. Stasis is a verified prediction of the Creation model—not the evolutionary paradigm. A lack

(cont. on p. 80)

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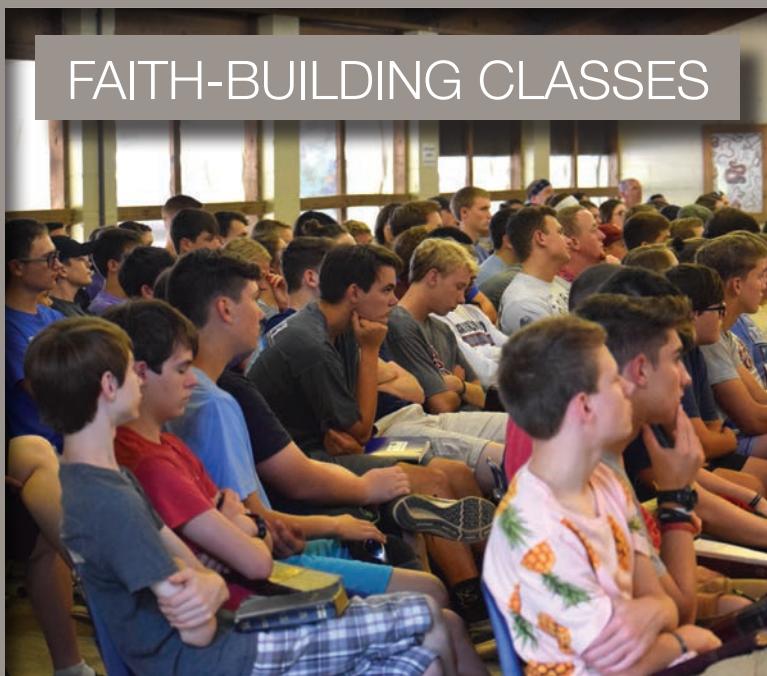
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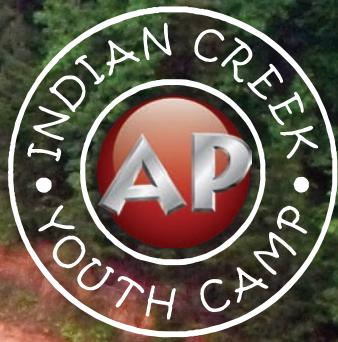
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of transitional fossils, especially among the invertebrates, along with the prevalence of “living fossils,” supports Creation—not evolution.

### CHARACTERISTIC #3: EXTINCTION

Five “mass extinction” events are said to have occurred in history, according to the evolutionary paradigm.<sup>23</sup>

- In the Ordovician extinction (445 million years ago), 60-70 percent of the Earth’s species went extinct.
- In the Devonian extinction (360-375 million years ago), up to 75 percent of the Earth’s species disappeared from the Earth.
- In the Permian extinction (252 million years ago), 95 percent of the Earth’s species went extinct.
- In the Triassic extinction (200 million years ago), 70-80 percent of the Earth’s species disappeared.
- In the Cretaceous extinction (65-66 million years ago), 75 percent of the Earth’s species went extinct.

According to evolutionists, the causes of these alleged worldwide extinction events are still unknown.

Creationists interpret the same data differently. First, the dates of the extinction events are incorrect, since they rely on radiometric dating.<sup>24</sup> All dates in millions of years can be telescoped to the biblical timeframe upon realization that, for example, the nuclear decay rates were apparently accelerated during the Flood. The Flood likely corresponds roughly to the Cambrian through Cretaceous periods (i.e., 540 million years ago to 66 million years ago, using the evolutionary timescale). Each of the extinction events, therefore, fall within the year-long Flood that occurred a few thousand years ago. The geologic column and fossil record provide an account of the Flood’s progression.<sup>25</sup> Hence, each of the major extinction events noted by evolutionists merely report the destruction of another of Earth’s major habitats/

ecosystems as the waters of the Flood continued to rise.

Regardless of one’s explanation of the evidence, extinction—**not evolution**—is a major trait of the fossil record. The biblical global Flood provides a powerful explanation for why worldwide death and extinction occurred in the fossil record and, at the same time, why fossils are typically found in sedimentary rock (which is typically formed from aqueous events).

### CONCLUSION

**T**he fossil record is a compilation of creatures that abruptly appear, fully formed, in the rock layers of the Earth with no evolutionary history. They remain virtually the same throughout the record, and then oftentimes disappear from the surface of the Earth. Do these pervasive, endemic traits of the fossil record support the biblical accounts of Creation and the Flood, or is the naturalistic paradigm the better explanation for the origin of the fossils? **Clearly, the Theory of Evolution does not fit the physical evidence.** Many of its most fundamental predictions are consistently falsified through observation of the evidence left for us in the fossil record. Evolution, therefore, has been effectively falsified. Upon assessing the evidence, it seems that one must be determined to ignore it, blindly holding to naturalism, to accept evolution. Biblical Creation and the Flood fit the evidence. They happened, whether or not we appreciate their implications regarding how we should live in order to please God and receive His eternal blessings (2 Peter 3:3-11).

### ENDNOTES

- 1 Jeff Miller (2019), “Was the Flood Global? Testimony from Scripture and Science,” *Reason & Revelation*, 39[4]:38-41,44-47.
- 2 E.g., Stephen Jay Gould (1980), *The Panda’s Thumb* (New York: W.W. Norton & Co.), pp.

181-182.

<sup>3</sup> Ibid.

<sup>4</sup> “Discovery of Giant Roaming Deep Sea Protist Provides New Perspective on Animal Evolution” (2008), *UT News*, November 20, [http://news.utexas.edu/2008/11/20/giant\\_protist](http://news.utexas.edu/2008/11/20/giant_protist).

<sup>5</sup> Daniel Osorio, Jonathan Bacon, and Paul Whitington (1997), “The Evolution of Arthropod Nervous Systems,” *American Scientist*, 85[3]:244, emp. added.

<sup>6</sup> Stephen J. Gould (1994), “The Evolution of Life on Earth,” *Scientific American*, 271:86, October.

<sup>7</sup> Richard Dawkins (1986), *The Blind Watchmaker* (New York: W.W. Norton), p. 229, bracketed comment in orig., emp. added.

<sup>8</sup> George G. Simpson (1953), *The Major Features of Evolution* (New York: Columbia University Press), p. 360.

<sup>9</sup> Lisa J. Shawer (1974), “Trilobite Eyes: An Impressive Feat of Early Evolution,” *Science News*, 105:72, February 2; Riccardo Levi-Setti (1993), *Trilobites* (Chicago, IL: University of Chicago Press), pp. 57-58; Richard Ellis (2001), *Aquagenesis* (New York: Viking), p. 49.

<sup>10</sup> Stephen C. Meyer (2013), *Darwin’s Doubt* (New York: HarperCollins), p. 31.

<sup>11</sup> Gould (1980), p. 182.

<sup>12</sup> Stephen Jay Gould (1977), “Evolution’s Erratic Pace,” *Natural History*, 86[6]:24, emp. added.

<sup>13</sup> Stephen Jay Gould (1980), “Is a New and General Theory of Evolution Emerging?” *Paleobiology*, 6[1]:119-130, Winter, p. 127, emp. added.

<sup>14</sup> Gould (1977), p. 13, emp. added.

<sup>15</sup> Steven Stanley (1977), *Macroevolution* (San Francisco, CA: Freeman), p. 39, emp. added.

<sup>16</sup> Robert Barnes (1980), “Invertebrate Beginnings,” *Paleobiology*, 6[3]:365, emp. added.

<sup>17</sup> James Valentine and Douglas Erwin (1987), “Interpreting Great Developmental Experiments: The Fossil Record,” *Development as an Evolutionary Process* (New York: Alan R. Lias), p. 84, emp. added.

<sup>18</sup> Mark Ridley (1981), “Who Doubts Evolution?” *New Scientist*, June 25, 90:832.

<sup>19</sup> Charles Darwin (1956), *The Origin of Species* (London: J.M. Dent & Sons), pp. 292-293, emp. added.

<sup>20</sup> Colin Patterson (1979), Letter of April 10, 1979 to Luther Sunderland: reprinted in *Bible-Science Newsletter*, 19[8]:8, August, 1981, emp. added.

<sup>21</sup> John D. Morris (1994), “Does the Geologic Column Prove Evolution?” *Acts & Facts*, 23[7], <https://www.icr.org/article/does-geologic-column-prove-evolution>.

<sup>22</sup> John D. Morris and Frank J. Sherwin (2010), *The Fossil Record* (Dallas, TX: Institute for Creation Research), pp. 113-114; “Are Horseshoe Crabs Really Crabs?” (2018), National Ocean Service, June 25, <https://oceanservice.noaa.gov/facts/horseshoe-crab.html>; Paul Bunje (n.d.), “The Monoplacophora,” University of California Museum of Paleontology, <http://www.ucmp.berkeley.edu/taxa/inverts/mollusca/monoplacophora.php>.

<sup>23</sup> “Earth’s Major ‘Mass Extinction’ Events” (2017), *Phys.org*, July 17, <https://phys.org/news/2017-07-earth-major-mass-extinction-events.html>.

<sup>24</sup> Jeff Miller (2013), “Don’t Assume Too Much: Not All Assumptions in Science Are Bad,” *Reason & Revelation*, 33[6]:62-70, [http://apologeticspress.org/pub\\_rar/33\\_6/1306.pdf](http://apologeticspress.org/pub_rar/33_6/1306.pdf).

<sup>25</sup> Miller (2019).

# Were the Giza Pyramids Built Before the Flood?

Jeff Miller, Ph.D.

rocks of the Cenozoic era, which were laid down **after** the Flood. The Giza Pyramids were built in the Cenozoic layers (during the Eocene period<sup>5</sup>) that were deposited **after** the Flood—implying that the Giza Pyramids were not built before the Flood. The date of their construction has possibly been inflated based on uniformitarian dating schemes.

## ENDNOTES

<sup>1</sup> Brian Handwerk (2017), “Pyramids at Giza,” *National Geographic*, March 23, <https://www.nationalgeographic.com/archaeology-and-history/archaeology/giza-pyramids/>.

<sup>2</sup> Jeff Miller (2019), “21 Reasons to Believe the Earth is Young,” *Reason & Revelation*, 39[1]:10.

<sup>3</sup> Mike Houts (2015), “Assumptions and the Age of the Earth,” *Reason & Revelation*, 35[3]:26-34.

<sup>4</sup> S.A. Austin and K.P. Wise (1994), “The Pre-Flood/Flood Boundary: as Defined in Grand Canyon, Arizona and Eastern Mojave Desert, California,” *Proceedings of the Third International Conference on Creationism*, Technical Symposium Sessions (Pittsburgh, PA: Creation Science Fellowship), pp. 37-47.

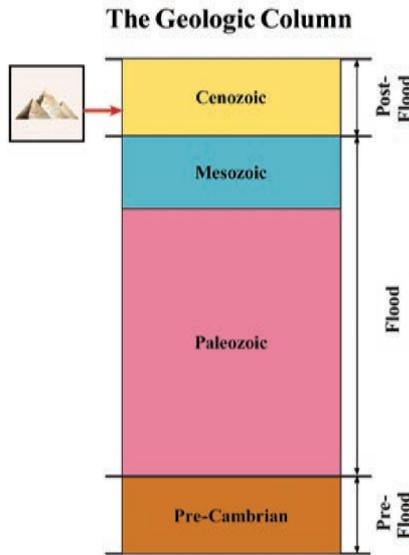
<sup>5</sup> M.M. El Aref and E. Refai (1987), “Paleokarst Processes in the Eocene Limestones of the Pyramids Plateau, Giza, Egypt,” *Journal of African Earth Sciences*, 6[3]:367-377, <https://www.sciencedirect.com/science/article/pii/0899536287900790>.

**Q:** If the Egyptian Pyramids of Giza were built around 4,600 years ago<sup>1</sup> and the Flood was about 4,400 years ago, does that mean the pyramids were built prior to and survived the Flood?

**A:** First, keep in mind that, although roughly 2,400 B.C. is generally accepted as the date of the Flood, the chronologies of Genesis 11 allow for an expansion of a few hundred years.<sup>2</sup> Also keep in mind that dating techniques that are used to determine the age of ancient materials, such as carbon dating and tree ring analysis, rely on the assumption of uniformitarianism.<sup>3</sup> These methods would be invalid if a worldwide catastrophic Flood occurred followed by a Flood-induced Ice Age. If the

Flood actually occurred, and nuclear decay rates were accelerated during and after its occurrence for a period of time (and sub-annual tree rings were forming due to the Ice Age) as many creationists contend, all ages dating before roughly 1,000-1,500 B.C. would be inflated, giving an appearance of age beyond their true age.

Also, when we examine the layers of rock that form the continents upon which we reside, there is little doubt that the Cambrian strata—the beginning of the Paleozoic Era—represent the commencement of the biblical Flood.<sup>4</sup> The rock layers throughout the Paleozoic, and overlying Mesozoic layers, approximately represent the sediment that was deposited during the Flood. **Above** those layers are the



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### Eric Lyons

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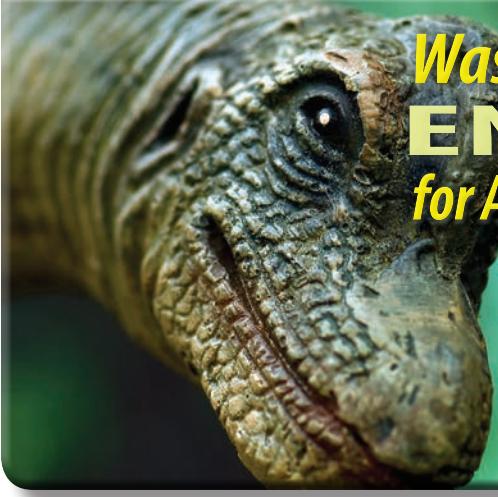
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### Jeff Miller

July 7  
July 11-31

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# Was the Ark Large ENOUGH for ALL of the Animals?

Jeff Miller, Ph.D.

**I**F there are around 11,000,000 species on the planet today,<sup>1</sup> and there were at least two representatives of every species on the Ark (and in some cases seven or 14<sup>2</sup>), how could the Ark be large enough to house its passengers for an entire year—some of which were dinosaurs? Here are four relevant points that clear up this seeming impossibility.

(1) It is true that dinosaurs would have been on the Ark. Since the commencement of the Flood in the geologic column and fossil record is clear—the “Great Unconformity” and the Cambrian Explosion, respectively—and the dinosaurs are found well above those worldwide geologic features, the dinosaurs were alive when the Flood began. As land-living creatures, therefore, they would have been represented on the Ark. Further, archaeological evidence verifies the existence of dinosaurs after the Flood.<sup>3</sup>

That said, it is virtually certain that God did not send to Noah adult representatives of the species He wanted on the Ark. Adult species require more space, food, and water, and produce more waste. Further, they would not survive as long after

the Flood as would juvenile species and, therefore, would not be as well-suited for repopulating the Earth as would juvenile species. Juvenile species, obviously, would take very little space on the Ark. Even the enormous sauropod dinosaurs were likely less than seven inches in size when hatched.<sup>4</sup>

(2) It is not certain that there are 11,000,000 species on the planet. The actual catalogued number of species as of 2018 was roughly 1.8 million.<sup>5</sup> Biologists are projecting they will eventually catalogue 11,000,000 species. Even that number, however, includes many species that would not have been on the Ark (since the text does not list them among the ani-

mals Noah brought), including the entire kingdoms Plantae, Fungi, Protozoa, Chromista, Archaea, and Bacteria. Further, many creatures found within Animalia would not have been represented on the Ark, including marine creatures and many amphibians that could survive outside the Ark, as well as many of the insects (which make up the bulk of Animalia), since they do not have the “breath of life” (Genesis 7:15) and many would not be classified as “creeping things” (7:14) according to Scripture. The number of species represented on the Ark, therefore, would have been **significantly** lower than 11,000,000.

- (3) Moses used the “cubit” as the measurement standard for the dimensions of the Ark, which is often estimated to be roughly 18 inches—from the tip of the middle finger to the elbow.<sup>6</sup> Some scholars estimate a longer cubit, however. The fossil record reveals that reptiles (dinosaurs), plants, insects, and marine creatures grew much larger than do most animals today. If humans also were larger in the pre-Flood era, as *Homo heidelbergensis* fossils may imply, the cubit could have been larger as well. A 25-inch cubit would more than double the volume of space within the Ark (1,518,750 cubic feet vs. 4,062,500 cubic feet).
- (4) The text of Genesis indicates that “kinds” of creatures—not species—were brought on the Ark. As discussed elsewhere,<sup>7</sup> the two terms are not equivalent. The designation “species” was developed relatively recently—thousands of years after Moses wrote. “Kind” is likely more closely related to



Replica of *Homo heidelbergensis* skull



the modern taxonomic terms “family” or “genus.” Much of the diversity we see within those categories—the many species of the planet—may have come about after the Flood due to the inheritable variation within the genomes of the proto-species on the Ark. Representatives of the canines, for example, were on the Ark, from which likely came foxes, wolves, jackals, coyotes, dingoes, and domesticated dogs.

Creation geologist and biologist John Woodmorappe conducted a thorough study of the feasibility of housing 16,000 animals (representatives from each of

the genus taxonomic rank; i.e., even more than would be represented if the family rank was used instead) in the Ark, taking into account the spatial requirements for food, water, waste disposal, heating, ventilation, and lighting, and found that the Ark was more than adequate in size to house the animals.<sup>8</sup>

The Ark was well equipped to meet the challenge of housing thousands of animals with room to spare. Obviously, it would be expected that the Ark would be large enough for its passengers considering God knew how many species He would be sending to Noah and therefore how large the Ark needed to be—both variables

that God, Himself, controlled (Genesis 6:14-16,20). As is **always** the case: there is no rational reason to distrust what the Bible says.

#### ENDNOTES

<sup>1</sup> Camilo Mora, Derek P. Tittensor, Sina Adl, Alastair G.B. Simpson, and Boris Worm (2011), “How Many Species Are There on Earth and in the Ocean?” *PLoS Biology*, 9[8]:e1001127, <https://apologeticspress.page.link/HowManySpecies>.

<sup>2</sup> Eric Lyons (2004), “How Many Animals of Each Kind did Noah Take into the Ark?” Apologetics Press, <http://www.apologeticspress.org/Alleged-Discrepancies.aspx?article=656>.

<sup>3</sup> Eric Lyons and Kyle Butt (2008), *The Dinosaur Delusion* (Montgomery, AL: Apologetics Press).

<sup>4</sup> Simon Jackson (1997), “Dinosaur Eggs: Sauropod Eggs,” University of Bristol: Earth Sciences, <http://palaeo.gly.bris.ac.uk/palaeofiles/eggs/Types/sauropods.html>.

<sup>5</sup> “About the Catalogue of Life” (2018), *Catalogue of Life: 2018 Annual Checklist*, <http://www.catalogueoflife.org/annual-checklist/2018/info/about>.

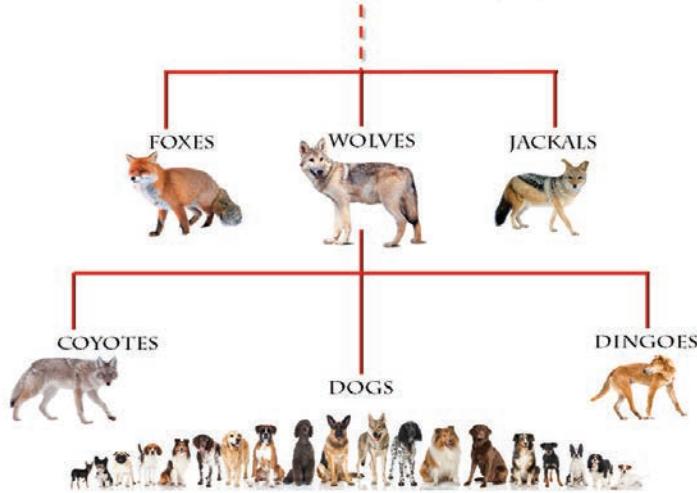
<sup>6</sup> Walter A. Elwell, ed. (1988), *Baker Encyclopedia of the Bible* (Grand Rapids, MI: Baker), p. 2136.

<sup>7</sup> Jeff Miller (2017), *Science vs. Evolution* (Montgomery, AL: Apologetics Press), 2<sup>nd</sup> edition, p. 132.

<sup>8</sup> John Woodmorappe (1996), *Noah’s Ark: A Feasibility Study* (Santee, CA: Institute for Creation Research).

#### AN EXAMPLE OF A POSSIBLE BIBLICAL “KIND”

##### ARK CANINE PROTO-SPECIES (???)



**NOTE FROM***The Editor**Another Great AP Summer Camp*

Apologetics Press just completed our ninth year of conducting apologetics summer camps. Under the experienced and able direction of Eric Lyons, the 280+ individuals who were able to attend this year's camp enjoyed an outstanding venue of spiritually enriching information on "The Flood."

AP camps provide a tremendous means of nurturing the young in light of the widespread unbelief and secularism plaguing American society. They promote moral and spiritual growth. They create new friendships that enable young people to have a network of individuals who are also trying to live for Christ. Quite frankly, we at AP have been pleasantly surprised and thrilled that AP camps have been so successful in achieving noble spiritual goals. They have become one of AP's most effective tools in the promotion



of the cause of Christ and the defense of the Christian Faith.

The next AP camp is scheduled for June 2020 and will focus on "A Survey of Christian Evidences." If you want your children to experience an outstanding summer camp, to be

strengthened spiritually, and to be exposed to quality Christian young people and adults, you should consider enrolling them in the AP Christian Evidences Summer Camp. The popularity of the camp grows each year. Registration opens soon after the first of the year and the enrollment for the week fills very quickly. Consider committing your 5th through 12th grader to a week of life-changing experiences.

**Dave Miller**

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